WHAT IS CLAIMED IS:

1. An information recording medium substrate having a surface roughness of Rmax 15 nm or less,

wherein for the surface of said substrate, a bearing area value (offset bearing area value) in a depth of 0.5 to 5 nm (predetermined slice level) from a bearing height (real peak height) corresponding to the bearing area value of 0.2% to 1.0% is 90% or less.

2. An information recording medium substrate having a surface roughness of Rmax 15 nm or less,

wherein for the surface of said substrate, when a depth corresponds to 20 to 45% of Rmax from a bearing height (real peak height) corresponding to a bearing area value of 0.2% to 1.0% is set as a slice level, the bearing area value (offset bearing area value) is 90% or less.

3. The information recording medium substrate according to claim 1 or 2 wherein said information recording medium substrate is a glass substrate whose surface is subjected to precision polishing and/or etching treatment.

4. An information recording medium having a surface roughness of Rmax 15 nm or less on a medium surface,

wherein for a medium surface of said information recording medium, a bearing area value (offset bearing area

value) in a depth of 0.5 to 5 nm (predetermined slice level) from a bearing height (real peak height) corresponding to the bearing area value of 0.2% to 1.0% is 90% or less.

5. An information recording medium having a surface roughness of Rmax 15 nm or less on a medium surface,

wherein for a medium surface of said information recording medium, when a depth corresponds to 20 to 45% of Rmax from a bearing height (real peak height) corresponding to a bearing area value of 0.2% to 1.0% is set as a slice level, the bearing area value (offset bearing area value) is 90% or less.

6. The information recording medium according to claim 4 or 5 wherein a friction coefficient based on the surface roughness of the medium surface is 3 or less.

7. The information recording medium according to any one of claims 4 to 6 wherein a correlation of the friction coefficient in the information recording medium with various lubricants formed thereon with an offset bearing area is checked, and the lubricant with a reduced friction force by the lubricant is employed.

8. The information recording medium according to claim 7 wherein said lubricant is a lubricant classified in perfluoro alkyl polyether (PFPE), including ether joining in

a main chain, having $-(OCF_2F_2)_m(OCF_2)_n-$ straight chain structure, and having a hydroxyl group as a terminal group.

9. A manufacture method of a glass substrate for an information recording medium, comprising steps of:

immersing the glass substrate in a heated chemical reinforcing treatment liquid, and subjecting an ion on a glass substrate surface layer to ion exchange with an ion in the chemical reinforcing treatment liquid to chemically reinforce the glass substrate; and

treating the surface of the glass substrate drawn up from the chemical reinforcing treatment liquid with a treatment liquid containing silicofluoric acid.

10. A manufacture method of a glass substrate for an information recording medium, provided with steps of: polishing a glass substrate surface; and immersing the glass substrate in a heated chemical reinforcing treatment liquid, and subjecting an ion of a glass substrate surface layer to ion exchange with an ion in the chemical reinforcing treatment liquid to chemically reinforce the glass substrate, said method comprising steps of:

controlling the glass substrate surface by a chemical treatment to provide a desired surface roughness before the chemical reinforcing step; and

treating the surface of the glass substrate drawn up from said chemical reinforcing treatment liquid with a

treatment liquid containing silicofluoric acid.

11. The manufacture method of the glass substrate for the information recording medium according to claim 10 wherein said chemical treatment comprises treatment with the treatment liquid containing at least one acid selected from the group consisting of sulfuric acid, phosphoric acid, nitric acid, hydrofluoric acid, and silicofluoric acid, or alkali.

12. The manufacture method of the glass substrate for the information recording medium according to any one of claims 9 to 11 wherein a concentration of said silicofluoric acid is in a range of 0.01 to 10 wt%.

13. A manufacture method of an information recording medium, comprising steps of forming at least a recording layer on the surface of the information recording medium glass substrate obtained by claims 9 to 12.

14. A management technique of a friction coefficient based on a surface roughness in an information recording medium surface having a surface roughness of Rmax 15 nm or less, comprising steps of:

when repeated measurement of a bearing curve is performed by an atomic force microscope (AFM), obtaining a bearing area value at which a measured value of a bearing

height rapidly starts to scatter in the vicinity of a maximum protrusion height (BA = 0%), and obtaining the bearing height (real peak height) corresponding to the bearing area value from the bearing curve;

checking a correlation of a bearing area in a predetermined depth from said real peak height with the friction coefficient based on the surface roughness by changing said predetermined depth;

from said correlation, with respect to a change amount of the friction coefficient, obtaining a predetermined depth (predetermined slice level) at which the corresponding change amount of the bearing area increases; and

using the bearing area value (offset bearing area value) in said predetermined slice level to manage the friction coefficient based on the surface roughness.

15. A management technique of a friction coefficient based on a surface roughness in an information recording medium having a surface roughness of Rmax 15 nm or less on a medium surface, comprising steps of:

using a bearing area in a depth of 0.5 to 7 nm (slice level) from a maximum height (Rmax) by AFM measurement to manage the friction coefficient based on the surface roughness.

16. A management technique of a friction coefficient based on a surface roughness in an information

recording medium having a surface roughness of Rmax 15 nm or less on a medium surface, comprising steps of:

using a bearing area when a depth corresponds to 20 to 40% of Rmax from a maximum height (Rmax) by AFM measurement is set as a slice level, and managing the friction coefficient based on the surface roughness.

17. An information recording medium manufacture method for manufacturing an information recording medium having a desired medium surface based on the management technique of the friction coefficient based on the surface roughness according to claims 14 to 16.

18. A manufacture method of an information recording medium substrate for reflecting an information recording medium substrate surface in an information recording medium surface to obtain a desired medium surface, said method comprising steps of manufacturing the information recording medium substrate having a desired substrate surface based on the management technique of the friction coefficient based on the surface roughness according to claims 14 to 16.

19. A management technique of a surface state of an information recording medium substrate surface having a surface roughness of Rmax 15 nm or less, said technique comprising steps of:

when repeated measurement of a bearing curve is

performed by an atomic force microscope (AFM), obtaining a bearing area value at which a measured value of a bearing height rapidly starts to scatter in the vicinity of a maximum protrusion height (BA = 0%); and

utilizing various AFM measured values excluding data from BA = 0% to the bearing area value at which the bearing height measured value rapidly starts to scatter.

20. An information recording medium substrate manufacture method for manufacturing an information recording medium substrate having a desired substrate surface based on the surface state management technique of claim 19.

21. A management technique of a surface state of an information recording medium surface having a surface roughness of Rmax 15 nm or less, said technique comprising steps of:

when repeated measurement of a bearing curve is performed by an atomic force microscope (AFM), obtaining a bearing area value at which a measured value of a bearing height rapidly starts to scatter in the vicinity of a maximum protrusion height (BA = 0%); and

utilizing various AFM measured values excluding data from BA = 0% to the bearing area value at which the bearing height measured value rapidly starts to scatter.

22. An information recording medium manufacture

method for manufacturing an information recording medium having a desired medium surface based on the surface state management technique of claim 21.